

**GENERAL INFORMATION**
**General information**

Typology	Master alloy for silver
Color	Silver
Production process	Casting
Grain refinement level	Low
Deoxidation level	High

**Commercial composition (%)**

CU	71.0
ZN	29.0

**Melting Temperatures**

Solidus [°C]	785.0
Liquidus [°C]	885.0
Melting range [°C]	100.0

**FULL CHARACTERIZATION DATA**
**Color coordinates**

L *	a*	b*	c*	Yellow Index
91.0	-0.6	4.4	4.4	9.1

**Mechanical characteristics**

As cast hardness [HV 0.2]	55.0
Hardness after 70% area red. [HV 0.2]	160.0
Hardness after annealing [HV 0.2]	70.0
Double step age-hardening hardness [HV 0.2]	125.0
Single step age-hardening hardness [HV 0.2]	90.0
Tensile strength (Rm) [Mpa]	257.0
Yield strength (Rp0.2) [MPa]	123.0
Elongation at rupture (A) [%]	31.0

**Physical characteristics**

Density [g/cm <sup>3</sup> ]	10.2
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**General characteristics**

As cast grain size [μm]	170.0
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**Product applications**

Stone-in-place casting  
 Casting in closed systems  
 Casting in open systems  
 Casting without stones

**CASTING PROCESSING PARAMETERS**
**Pre-melting temperature**

Temperature [°C] 1005

**POURING TEMPERATURES**

	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	640	680	985	1015
0.5 - 1.2 mm	560	640	965	985
> 1.2 mm	500	540	945	965

**Trees without stones**

Let the flask cool down in the chamber for 1 minute after pouring. Take the flask out of the machine without shaking it, let it cool for 15 minutes in air, then quench in water.

**Stone-in-place casting trees**

Let the flask cool down for 30-45 minutes, then quench it in water.

**Pickling**

Dip in RADIAL solution (50 g/l conc. at 60°C) for 2 minutes, or in sulphuric acid (10% concentration at 50°C) for 5 minutes.

**AGE HARDENING PROCESSING PARAMETERS**
**SINGLE STEP**

Temperature [°C]

Time [min]

Quenching

**AGE HARDENING**

300.0

90.0

In air or in furnace

**DOUBLE STEP**

Temperature [°C]

Time [min]

Quenching

**Homogenization**

730.0

40.0

In water, immediate

**Age-hardening**

300.0

60.0

In air or in furnace